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ABSTRACT

A group of highly regarded schools in affluent suburban areas was divided into two groups: those judged to have a traditional orientation and those judged to have a more experimental orientation, in terms of course and program structure. A review of the mean Scholastic Aptitude Test (SAT) from the 1966, 1969, 1973, and 1976 graduating classes from these schools showed that (1) mean SAT scores for both school groups were substantially higher than national averages; (2) declines in mean SAT scores for both groups over the period studied very nearly paralleled the national declines; and (3) declines for experimental schools were slightly larger than those for the traditional schools. This was a small-scale pilot test using available data. Because of the relatively fallible procedures used for classifying schools, and because of a general lack of experimental controls of extraneous factors, the results cannot support any general decline. (Author/EVH)

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Comparison of SAT Score Trends in Selected Schools Judged to Have Traditional or Experimental Orientations

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This study presents results of analyses of Scholastic Aptitude Test (SAT) scores for four graduating classes--1966, 1969, 1973, and 1976--in two contrasting groups of schools, one judged to be "traditional" and the other "experimental" in orientation. Since the national decline in mean SAT scores is attributed by some to increasing educational innovation in secondary schools, it was felt that an informal study of the kind reported here, while it could not support definitive conclusions, might provide some insight into whether further pursuit of this kind of inquiry would be fruitful.

All the schools in this study--16 in the traditional category and 12 in the experimental category--are public high schools. All but a few of the schools are highly regarded schools in affluent, suburban areas. Several are selective schools in urban areas. Mean SAT-verbal and SAT-mathematical scores for these schools for the years under study were consistently higher than the national averages--from 34 to 41 points for the traditional schools and from 47 to 60 points for the experimental schools. Within each group, the Eastern, Midwestern, and Western sections of the country are represented.

Schools were selected for the study and classified as "traditional" or "experimental" in general orientation with the assistance of staff members of the National Association of Secondary School Principals. In general, the schools nominated as experimental tended to be those that had adopted such innovations as minicourses and a range of elective courses, that had tried new methods in delivery of instruction, that had experimented with schedule modifications, and that in general were judged to provide more latitude for student choice. Thus, the experimental-traditional distinction does not reflect mainly differences in flexibility of course and program structure.

The resulting assignment of schools to the two groups was based on the judgment and knowledge of a single (but highly qualified) group of judges. It is likely that, had additional judgments been solicited, there would not have been complete agreement on all assignments to categories. However, there is no reason to doubt that, in the aggregate, the groups are contrasted on the intended dimension.

The original samples consisted of 19 traditional and 15 experimental schools. However, when the data were analyzed, it was found that several schools had either no students or very few students tested with the SAT for at least one of the years under study. These schools were dropped, reducing the samples to 16 traditional and 12 experimental schools.

The main result of this study is apparent from inspection of Table 1. From 1966 to 1976, mean scores for the traditional schools declined by 45 points on SAT-V and 24 points on SAT-M. For the experimental schools, the declines were 51 points on SAT-V and 30 points on SAT-M. For the national SAT candidate population (testing year data), the declines from 1965-66 through 1975-76 were 42 points on SAT-V and 26 points on SAT-M. Thus, the traditional schools show declines very close to the national figures, while the experimental schools show slighly larger declines.

Table 2 gives the percentage distributions of SAT scores for students in the two groups of schools for the years under study. It is apparent that the national experience of declining numbers of high scoring

Table 1. Mean SAT Scores for Students in the 1966, 1969, 1973, and 1976 Graduating Classes of Two Groups of Schools

Class	16 schools judged to have a traditional orientation			12 schools judged to have an experimental orientation		
	N	Mean SAT-V	Mean SAT-M	N	Mean SAT-V	Mean SAT-M
1966.	5862	511	532	6092	531	549
1969.	6342	525	532	7201	519	546
1973.	6130	481	519	6491	493	529
1976.	6079	466	508	6335	480	519

Table 2. Percentages of Students in Given SAT Score Ranges, Graduating Classes of 1966, 1969, 1973, and 1976 of Two Groups of Schools

(a) Verbal

Range	16 schools judged to have a traditional orientation				12 schools judged to have an experimental orientation			
	1966	1969	1973	1976	1966	1969	1973	1976
700-800.	5.2	4.4	2.5	2.3	7.1	6.5	3.1	3.5
600-690.	18.5	17.0	13.6	11.2	23.7	21.2	17.3	14.5
500-590.	31.1	30.6	26.7	24.5	32.5	29.8	29.3	27.3
400-490.	30.0	31.7	35.5	34.5	24.0	26.6	29.3	29.2
300-390.	13.5	14.4	18.3	22.8	11.0	13.6	16.9	19.6
200-290.	1.7	1.9	3.3	4.7	1.7	2.2	4.0	5.8

(b) Mathematical

Range	16 schools judged to have a traditional orientation				12 schools judged to have an experimental orientation			
	1966	1969	1973	1976	1966	1969	1973	1976
700-800.	8.1	7.8	6.2	7.1	11.3	11.2	8.2	8.9
600-690.	22.3	22.1	18.5	16.8	26.8	25.6	22.6	19.8
500-590.	31.5	31.4	33.7	28.8	28.7	28.9	31.5	28.7
400-490.	25.5	27.5	27.5	28.2	22.1	22.9	22.8	24.8
300-390.	11.2	9.8	12.6	16.3	9.9	10.0	12.6	14.1
200-290.	1.4	1.4	1.5	2.7	1.2	1.3	2.3	3.7

students is paralleled in these schools, as both groups show sharp drops between 1966 and 1976 in the percentage of students scoring over 600 on SAT-V or SAT-M. For the traditional schools the percentage scoring over 600 declined from 23.7 to 13.5 percent for SAT-V and from 30.4 to 23.9 percent for SAT-M. For the experimental schools the corresponding declines were from 30.8 to 18.0 percent for SAT-V and from 38.1 to 28.7 percent for SAT-M.

Tables A1 and A2 give the mean scores by year for the individual schools in the sample. Except for school XI, which exhibits the unusual pattern of a 16-point decline for mean SAT-V score and a 16-point increase for mean SAT-M score, all schools in the study show some decline. This result provides some reassurance with regard to the possible effect of classification errors. Any shifting of several schools from one category to the other as a result of a more elaborate classification procedure would not change the result much. The general finding is that the total group of schools in this study (predominantly public high schools in affluent, suburban areas) exhibits a pattern of SAT score decline very similar to the national pattern with very little discernible difference in the score experience of schools judged to have a more traditional orientation as contrasted with those judged to have an experimental orientation.

Since the schools judged to have an experimental orientation did show a slightly larger decline than the other schools or than students nationally, the question arises whether the results would tend to support at least to a small degree the notion that the score decline may be attributable in part to innovation. Because of the small size of the difference and because differences in score trends for the two groups of school could well have been produced by other factors (such as demographic changes in the areas served by the schools), this study appears to provide little support for the theory attributing score decline to innovation. By the same token, the study cannot be regarded as being conclusive in ruling this theory out. It should be noted that a fairly limited definition of "experimental" was used in defining that group, that the classification procedure was fallible, and (again) that the acknowledged influence of other factors on SAT score trends may have operated to obscure differences between these groups that would otherwise have appeared. At best, this exploratory study suggests that investigation of other theories about the SAT score decline have a greater likelihood of advancing understanding of the phenomenon.

Table A1. Numbers of Cases and Mean SAT-Verbal and SAT-Mathematical Scores, for Students from the 1966, 1969, 1973, and 1976 Graduating Classes of Selected Public High Schools Having a Traditional Orientation

	1966			1969			1973			1976			Differences in means (1966-1976)	
School	N	Mean SAT-V	Mean SAT-M	N	Mean SAT-V	Mean SAT-M	N	Mean SAT-V	Mean SAT-M	N	Mean SAT-V	Mean SAT-M	SAT-V	SAT-M
TA	346	492	527	466	499	530	420	478	529	462	466	523	26	4
TB	128	524	550	164	521	539	225	498	530	284	464	510	60	40
TC	259	554	570	277	530	542	221	503	548	247	520	558	34	12
TD	185	524	555	231	508	547	180	520	559	218	507	533	17	22
TE	501	509	530	557	496	519	545	482	508	410	473	508	36	22
TF	1055	510	522	820	516	536	781	491	507	751	480	507	30	15
TG	469	503	512	497	473	493	454	457	496	378	446	485	57	27
TH	58	422	461	57	449	472	55	424	464	76	418	449	4	12
TI	236	480	519	318	477	509	383	462	518	353	450	498	30	21
TJ	269	496	533	333	505	543	280	470	524	258	454	505	42	28
TK	228	497	519	325	501	518	324	474	508	351	454	503	43	16
TL	402	507	543	426	496	535	476	487	522	466	457	514	50	29
TM	449	503	524	489	495	536	500	472	525	466	444	497	59	27
TN	470	511	516	548	515	534	467	498	525	505	467	491	44	25
TO	256	505	520	245	506	530	475	463	514	456	461	504	44	16
TP	551	551	574	589	536	577	344	507	536	398	480	521	71	53

Table A2. Numbers of Cases and Mean SAT-Verbal and SAT-Mathematical Scores, for Students from the 1966, 1969, 1973, and 1976 Graduating Classes of Selected Public High Schools Having an Experimental Orientation

School	1966			1969			1973			1976			Differences in means (1966-1976)	
	N	Mean SAT-V	Mean SAT-M	N	Mean SAT-V	Mean SAT-M	N	Mean SAT-V	Mean SAT-M	N	Mean SAT-V	Mean SAT-M	SAT-V	SAT-M
XA	1082	498	516	1155	483	510	1084	461	499	988	453	487	45	29
XB	254	468	489	320	455	478	215	418	453	200	390	419	78	70
XC	758	533	554	928	524	553	737	500	552	758	478	525	55	29
XD	261	529	529	326	509	531	358	483	505	370	472	504	57	25
XE	333	529	539	388	501	510	346	491	526	426	468	504	61	35
XF	592	497	521	738	486	528	613	468	512	653	452	502	45	19
XG	640	510	532	773	510	534	759	474	492	739	471	500	39	32
XH	490	522	540	525	508	529	470	493	520	375	486	511	36	29
XI	152	520	547	342	533	569	344	503	557	281	504	563	16	(+16)
XJ	974	609	626	988	608	630	852	570	607	778	549	593	60	33
XK	254	576	611	288	546	629	253	534	605	288	543	581	33	30
XL	302	537	534	430	521	533	460	493	508	479	470	516	67	18